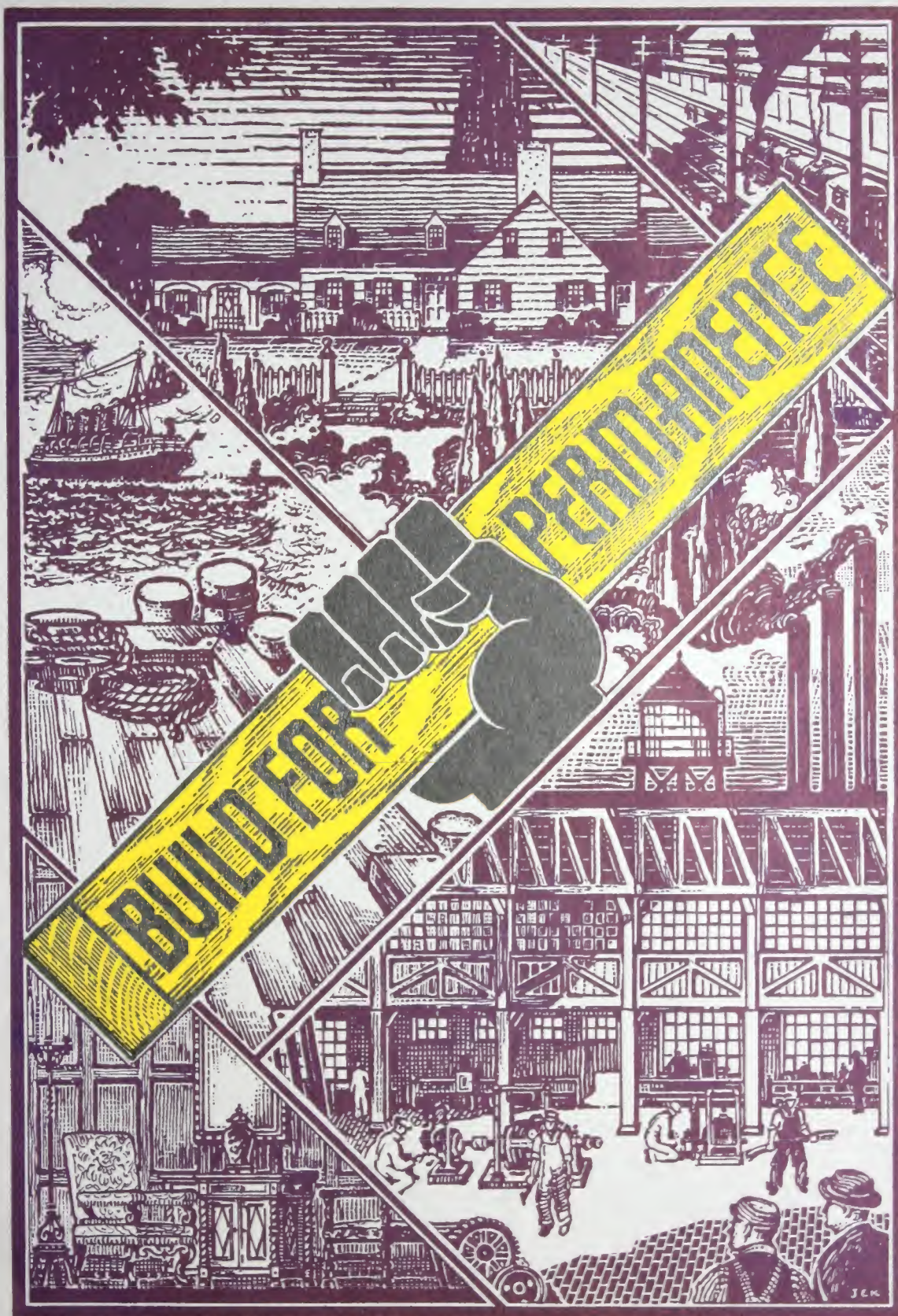


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# REILLY TRANSPARENT PENETRATING CREOSOTE



## REILLY TAR & CHEMICAL CORPORATION

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NEW YORK CITY  
2513 So. Damen Avenue  
CHICAGO, ILLINOIS  
Box 310  
MOBILE, ALABAMA

Merchants Bank Bldg.  
INDIANAPOLIS, INDIANA  
St. Louis Park  
MINNEAPOLIS, MINNESOTA  
Architects Bldg.  
LOS ANGELES, CALIFORNIA

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### PLANTS

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NEWARK, N. J.  
NORFOLK, VA.  
FAIRMONT, W. VA.  
DOVER, OHIO

MINNEAPOLIS, MINN.  
CHICAGO, ILL.  
GRANITE CITY, ILL.  
INDIANAPOLIS, IND.

CHATTANOOGA, TENN.  
MOBILE, ALA.  
PROVO, UTAH  
SEATTLE, WASH.

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## REILLY TRANSPARENT PENETRATING CREOSOTE

REILLY TRANSPARENT PENETRATING CREOSOTE is a new and distinct product possessing maximum preservative properties. Severe scientific tests have shown it to be the greatest forward step made in the field of wood preservation. It provides positive protection against the deterioration of lumber from insect attack and rot. Wood treated with REILLY TRANSPARENT PENETRATING CREOSOTE is dry, not oily, and can be painted.

### *Preserve Against Deterioration*

Insects and decay yearly destroy more than \$300,000,000\* worth of lumber already in service in the United States. The continued ravages of termites and decay in buildings causing this large economic waste show that the lumber used in the construction of the buildings was not protected against the attack of wood-destroying organisms. As the quantity of lumber used has been steadily increasing, and the quantity available steadily decreasing, the protection of lumber against deterioration has become an economic problem which has required and received scientific attention.

The failure to use preserved lumber in buildings in the past can be attributed to three causes: (a) the failure of the individual as well as the community to realize that termites have spread to all parts of the country; (b) the difficulty experienced heretofore in obtaining a material, scientifically prepared and easily applied, to protect lumber against insect attack and rot; (c) the inability of individuals as well as communities to cope with this problem.

### *Scientifically Proven*

The development of REILLY TRANSPARENT PENETRATING CREOSOTE is the result of years of scientific research by The Reilly Laboratories in co-operation with the Termite Investigations Committee. Intensive research on wood preservatives has been conducted for a number of years by The Reilly Laboratories. For four years the Termite Investigations Committee of California has studied all phases of the protection of lumber against termites.

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\*Calculated from the Report of National Committee on Wood Utilization, 1930.

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Termites imperil human life by weakening the supporting timbers of a building so that it is unsafe. Recently the joists of a house in New Jersey were weakened by termites to such an extent that the floor collapsed and the piano fell into the cellar. The above photograph shows the damage termites have done to an 8" x 8" joist in a building in Indianapolis.



Exhaustive tests under conditions far more rigorous than any encountered in actual service have demonstrated that REILLY TRANSPARENT PENETRATING CREOSOTE preserves the wood against both decay and wood-destroying insects.

The studies by the Termite Investigations Committee, a group of scientists, have proven that REILLY TRANSPARENT PENETRATING CREOSOTE affords complete protection against termites.

REILLY TRANSPARENT PENETRATING CREOSOTE is offered to the public because it was proven, by independent scientists working in the interest of the public, to protect lumber against termite attack, thus guarding against the collapse of buildings due to the weakening of supporting timbers by these insects.

### *Easily Applied*

The rapidity with which REILLY TRANSPARENT PENETRATING CREOSOTE penetrates deeply into the wood is another of its remarkable characteristics; the ease with which lumber can be treated is an outstanding development in the field of wood preservation. Certain woods, as larches, hemlock, firs, and white oak, because of their refractory nature are ordinarily difficult to treat under pressure; for these woods it is recommended that REILLY TRANSPARENT PENETRATING CREOSOTE be applied under pressure. Other woods, as southern pine, cypress, sap cedar, red oak, ashes, hickory, maple, gums, and cherries can be successfully treated by immersion.

### *Paintable*

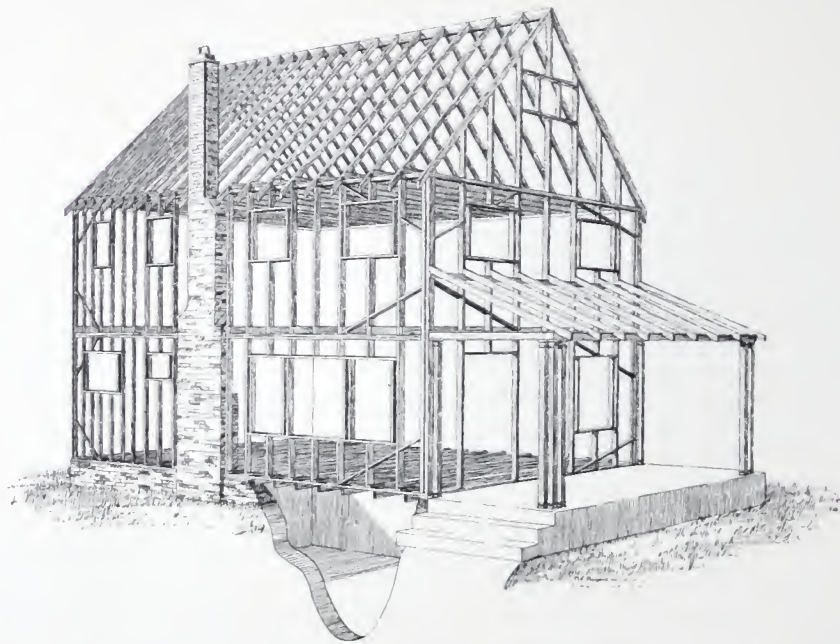
Wood treated with REILLY TRANSPARENT PENETRATING CREOSOTE remains practically unchanged in color, and its surface is not oily. Immediately after treatment the lumber is ready for use, and sixty days after it is in place the lumber can be painted. Before applying the first coat of paint the wood must be thoroughly brushed with a wire brush. Also, the preservative treatment being to a degree a filler, a saving of paint results because less is required to cover a given surface.

### *Anhydrous*

REILLY TRANSPARENT PENETRATING CREOSOTE contains no water. For this reason the preservative can be used to treat seasoned lumber without affecting its moisture content. It can also be used on glued stock without affecting the strength of the glued joints; thus it can be applied to completed window frames and sashes, doors, etc.

### *Economy*

Lumber treated with REILLY TRANSPARENT PENETRATING CREOSOTE does not decay nor is it attacked by termites or other insects. The use of REILLY TRANSPARENT PENETRATING CREOSOTE preserved lumber for sub-flooring and basement timbers, for fences and porches, for window frames and exterior trimming, and for roof construction obviates future replacements. Outdoor furniture is preserved against decay if wood treated with REILLY TRANSPARENT PENETRATING CREOSOTE is used in its construction. Wooden parts of automobiles outlast the car when treated with REILLY TRANSPARENT PENETRATING CREOSOTE.



The permanence and safety of a home are assured by using lumber preserved with REILLY TRANSPARENT PENETRATING CREOSOTE for the sills, joists, sub-flooring, studding, roof timbers, uprights, and stringers.

The house builder, by having his architect specify that only lumber treated with REILLY TRANSPARENT PENETRATING CREOSOTE shall be used in the construction of his building or home, is assured that his home will be a permanent structure and that **IT WILL NOT BE EATEN OUT OR ROTTED OUT FROM UNDER HIM.** The factory owner, the automobile manufacturer, the furniture maker, and other users of wood are likewise assured of the permanence of the



wood in their products if the wood has been treated with REILLY TRANSPARENT PENETRATING CREOSOTE.

### *Eradicates Termites*

The Reilly Tar and Chemical Corporation will supply special means and directions for the use of REILLY TRANSPARENT PENETRATING CREOSOTE to eliminate termites, powder-post beetles, and other insects



Decay could not cause the destruction shown above if the lumber had been preserved with REILLY TRANSPARENT PENETRATING CREOSOTE. All porch lumber should be made permanent by treatment with this preservative.

from buildings and lumber already infested by them. Not only does this preservative eliminate these destructive insects, but it also prevents their return to wood treated with it.

### *Prophylactic Treatment*

If termites have not yet infested the building, or if the lumber is not yet infested with fungi, treatment of the lumber with REILLY TRANSPARENT PENETRATING CREOSOTE will protect it against attack from both.

### *Sanitary*

A very unclean condition exists in the home when the wood is decaying and swarming with insects. The use of wood treated with REILLY TRANSPARENT PENETRATING CREOSOTE assures the occupant that his home will not be a breeding place of bugs nor will it be a bed of rot. No bugs can live in wood treated with REILLY TRANSPARENT PENETRATING CREOSOTE, neither will it rot.

## CAUSES OF DETERIORATION OF TIMBER

THE deterioration of lumber in buildings is largely caused by a group of wood-destroying organisms. For convenience the organisms responsible for the destruction of lumber in buildings can be divided into two classes — insects and fungi.

### *Termites*

Termites, sometimes erroneously called white ants, are the insects largely responsible for the deterioration of lumber. Like bees, they are social insects, living in colonies. Their work is divided among three different castes, reproductives, workers, and soldiers. Each colony is entirely shut off from the outer world as well as from intercommunication with other colonies. Within the confines of their colonies they are absolute masters of the conditions, to a degree controlling temperature, moisture, and perhaps even oxygen pressure.

Termites have a limited diet; they eat only cellulose. They are found in timber everywhere, in decaying stumps, in fence posts, in

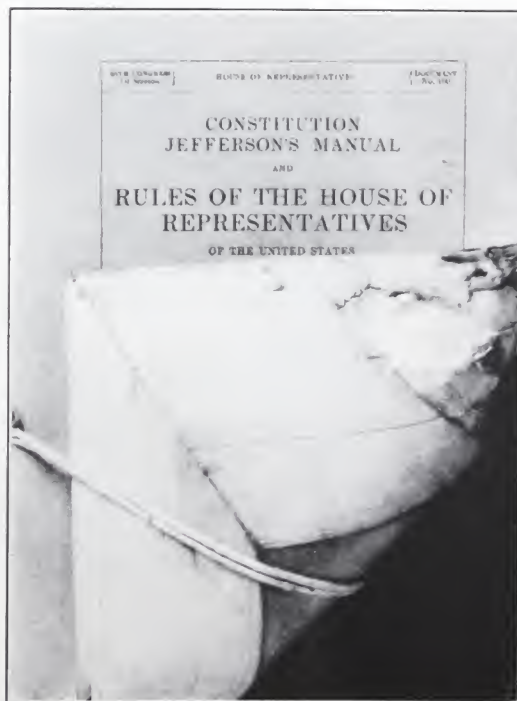


houses. All wooden structures which have not been properly preserved are subject to attack by them. And they even eat paper. They have fed upon such precious papers as "Jefferson's Manual on the Constitution and the Rules of the House of Representatives." They have invaded the Bureau of Engraving and Printing, where they have eaten postage stamps and paper currency.

Two distinct types of termites occur in this country, subterranean and non-subterranean. The former attack the wood from the ground; they even build tubes to feed on wood which is not in direct contact with the ground. The non-subterranean variety attack the wood directly after flying to it; this latter variety is sometimes referred to as the dry-wood termite because it attacks even the driest of timbers.

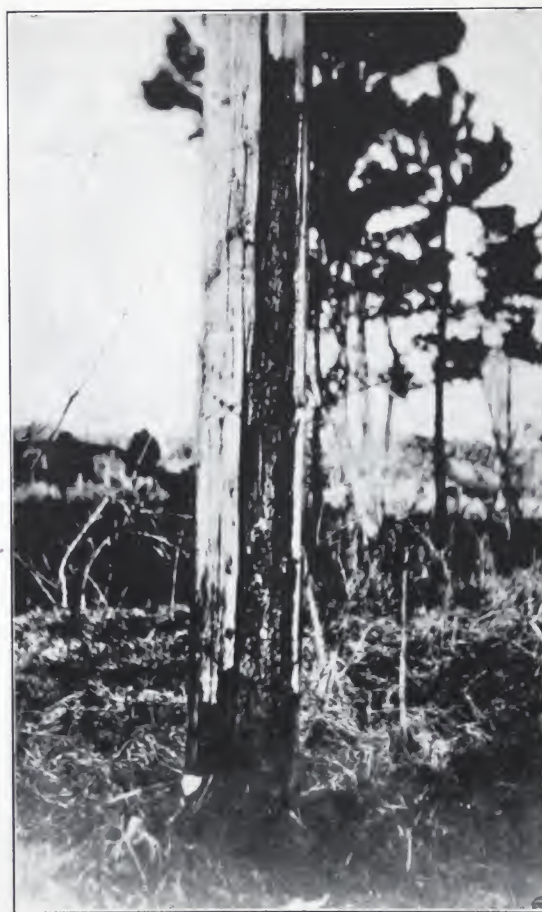
Termite damage is always hidden inside the wood. The outside of the attacked wood may present a very sound appearance and it is only rarely that the presence of termites is detected before considerable damage has been done, and frequently not until the timber collapses.

The right hand edge of the book shown was attacked by termites.



For this reason it is far more economical to use REILLY TRANSPARENT PENETRATING CREOSOTE as a preventive instead of a curative measure in combating termites. Lumber treated with REILLY TRANSPARENT PENETRATING CREOSOTE is assurance against the destructive action of these insects.

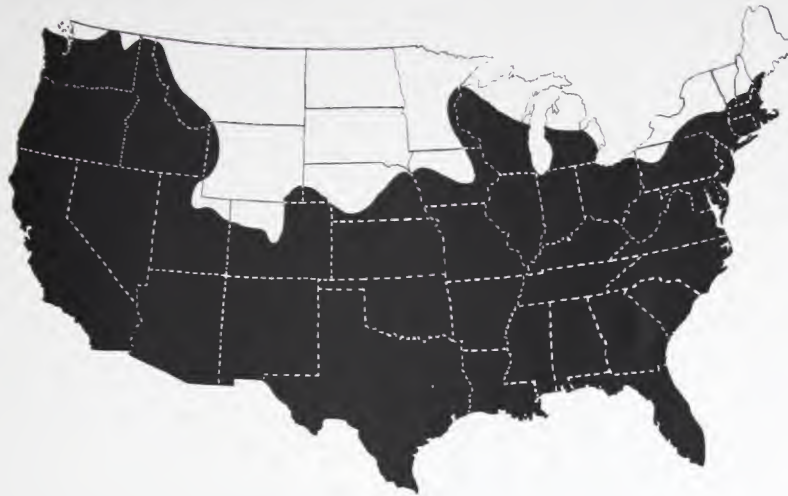
Termites are not limited to any one section of the globe; they are found everywhere within the confines of the tropical, subtropical and



Telegraph poles treated with REILLY TRANSPARENT PENETRATING CREOSOTE are not destroyed by termites as was the one pictured above; neither do they decay. Poles so treated are dry, not oily, and can be painted.



temperate zones. About one thousand different species are known and it is estimated that as many as five thousand exist. The extent to which



termite damage is spread over the United States is shown by the darkened portions of the accompanying map.

The rapidity with which termites multiply makes them extremely dangerous. Originally these insects were found only in the tropical countries, but some got into the colder regions; most of these died, but a few of the fittest survived. These multiplied and in a short time a species was evolved which was adapted to a new climate.

### **Rot**

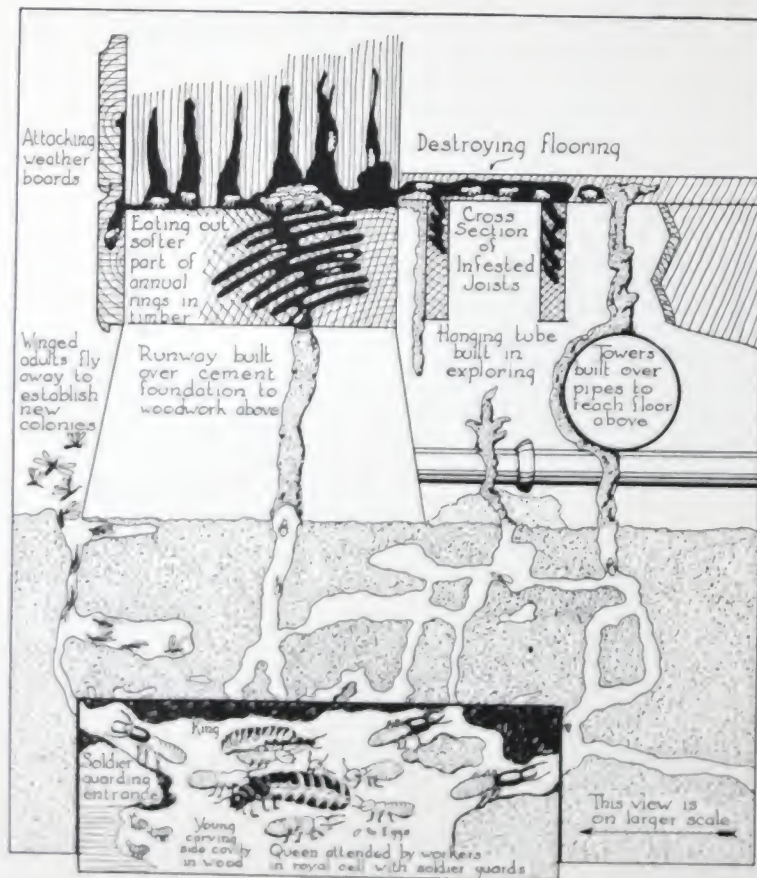
The rotting of wood is caused by a group of plants called fungi. These parasitic plants attach themselves to the wood, use it for food, and thus destroy it.

Besides food, fungi require air, warmth and moisture for their growth. Conditions which normally prevail in buildings are such that the fungi have available all the essentials for their propagation.

Misconceptions exist on the relationship of decay and the moisture content of the wood. An opinion seems to prevail that wood contain-

ing less than 20% of water (based on the weight of oven-dry wood) will not rot. This is definitely wrong. The true dry-rot fungi, *Merulius lacrymans* and *Poria incrassata*, which are responsible for a large amount of decay in buildings, bring about the decay of wood containing much less than 20% moisture.

Wood absorbs moisture from the air. Even though the lumber has been air-seasoned or kiln-dried before being put into the building, it will not remain so under normal conditions. Paint does not waterproof lumber. It merely retards and does not stop the absorption of moisture by the wood. Thus even painted wood is susceptible to decay.

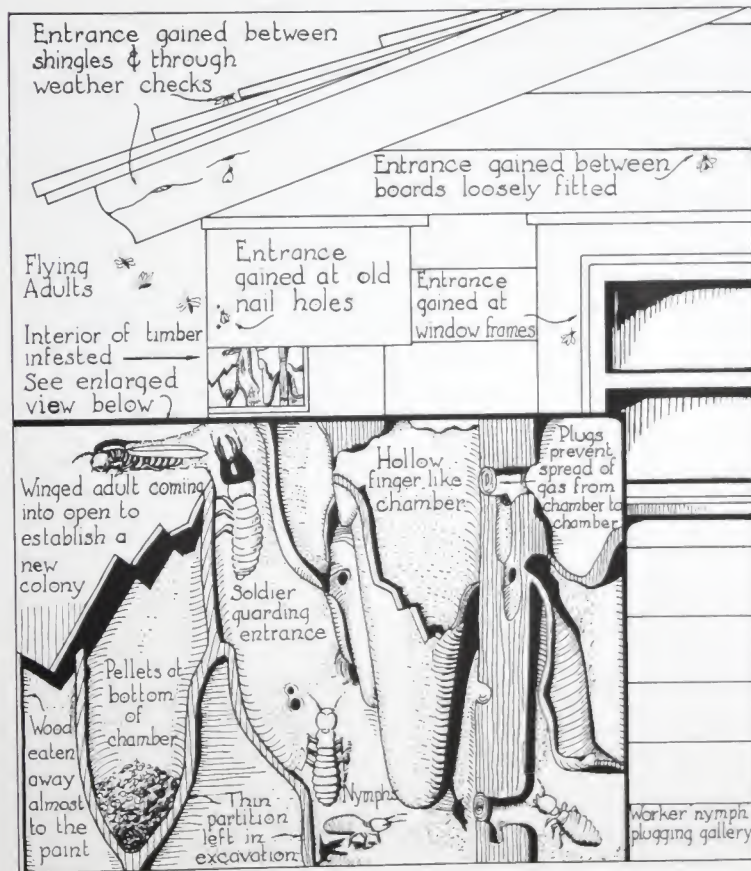


The diagram above shows the subterranean termites attacking a building from the ground. (T. E. Snyder.)



The rotting of wood may be very rapid. It is not a slow process as is generally supposed. The entire frame of a factory building including many 8" x 18" beams had to be replaced because of decay after three years of service. The accompanying photograph shows the extent of the destruction to a house done by decay in less than five years.

Decay is spread to a considerable extent by direct contact of untreated wood with infected wood. The fungus is in many cases introduced into a new building in the lumber itself. A piece of the new lumber has become infected in the lumber yard and then spreads the infection throughout the entire building. The possibility of receiving infected wood is entirely too great to be regarded lightly.



This diagram shows the manner in which the dry-wood termites attack a house. (T. E. Snyder.)



The exterior of these supports gave no indication of this weakness. The center beam looked just as those do on the right and left of it. However, examination showed that there was only a shell left to it; the rest was destroyed.



Decay fungi are also spread by the spores which they produce. These spores (seeds) are carried for long distances by the wind. If they settle on untreated or improperly treated wood, they sprout and germinate, and the wood commences to decay.



This house was destroyed by decay in less than five years. The use of wood treated with REILLY TRANSPARENT PENETRATING CREOSOTE assures against such destructive action.

Fungus and insect attack in buildings are prevented by the use of REILLY TRANSPARENT PENETRATING CREOSOTE. It is easy to prevent decay in buildings, but it is a difficult matter to eliminate decay once it has started. To be assured that rot will not destroy a building, the builder need only specify that only wood treated with REILLY TRANSPARENT PENETRATING CREOSOTE be used in its construction.







